

REMARKS

Applicants submit that by the present Amendment and Remarks, this Application is placed in clear condition for immediate allowance. At the very least, the present Amendment reduces the number of issues on Appeal as, for example, by canceling claims 2 and 8 through 11. Applicants further submit that the present Amendment does not generate any new matter issue, because limitations from claims 2 and 9 have been incorporated into claim 1. Applicants, therefore, solicit entry of the present Amendment and Remarks, and favorable consideration, pursuant to the provisions of 37 C.F.R. § 1.116.

In the Office Action dated July 22, 2005 the following rejections were imposed:

1. **Claims 1, 3, 4, 8, 10 and 11 were rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Saito;**
2. **Claim 2 was rejected under 35 U.S.C. § 103 for obviousness predicated upon Saito; and**
3. **Claim 9 was rejected under 35 U.S.C. § 103 for obviousness predicated upon Saito in view of IBM.**

Each of the above rejections is traversed. Specifically, the rejection of claims 1, 2, 3, 4, 8, 10 and 11 has been rendered moot by incorporating limitations from claim 2 and claim 9 into claim 1, and canceling claims 2 and 8 through 11. Accordingly, Applicants will treat the rejection under 35 U.S.C. § 103 imposed with respect to claim 9 as though it were imposed with respect to present independent claim 1.

Independent claim 1 is directed to a method which comprises a sequence of manipulative steps resulting in the formation of a protrusion on a diamond substrate by etching. The

protrusion or projection has a side face with an angle of inclination of at least 78 degrees. The etching gas employed to achieve that objective comprises nitrogen. Applicants submit that the claimed method is neither disclosed nor suggested by the applied prior art.

The Examiner recognizes that the primary reference to Saito does not disclose the use of nitrogen. The Examiner points to IBM and asserts it would have been obvious to employ nitrogen in Saito's method. Applicants disagree for two principal reasons.

The IBM reference discloses the addition of nitrogen and, quite significantly, reveals that the addition of nitrogen does **not** change the number of oxygen atoms. Therefore, the etching speed of debris does not increase – indeed it is maintained. The etching speed of polyimide decreases, so that the ratio of selection is improved. Thus, one having ordinary skill in the art would have understood that IBM discloses the addition of nitrogen for making the polyimide smooth.

In contradistinction to the teachings of IBM, nitrogen is employed in the present invention for **increasing** the number of oxygen atoms. Consequently, the **etching speed increases** to create a **projection** having a sidewall with an angle of inclination of at least 78 degrees. Thus, the function of nitrogen in the present invention is quite **different** than the function of nitrogen in IBM.

The addition of nitrogen in the present invention is clearly distinguished from the addition of nitrogen by IBM in another way. IBM is directed to a carbon system. The effect of introducing nitrogen in a carbon system **cannot** be directly related to the impact of nitrogen on diamond. This is because the action of nitrogen on debris is **different** from the action of nitrogen on diamond. Indeed the Examiner did **not factually** establish that one having ordinary skill in the art would have considered diamond and carbon equivalent for the purposes of an

etching system containing nitrogen. That **burden** is on the Examiner and has not been discharged. See, for example, *In re Mercier*, 515 F.2d 1161, 185 USPQ 774 (CCPA 1975); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Jezl*, 396 F.2d 1009, 158 USPQ 98 (CCPA 1968); *In re Naylor*, 369 F.2d 765, 152 USPQ 106 (CCPA 1966).

It is because of this **difference** between **nitrogen** and **carbon** that the addition of nitrogen unexpectedly causes the number of oxygen atoms to increase, thereby enhancing the etching of diamond. This difference between diamond and carbon in an etching system containing nitrogen gas undermines the conclusion that one having ordinary skill in the art would have been realistically motivated to arbitrarily extract the nitrogen from the system disposed by IBM, which is for a different purpose than in the present invention, and impress nitrogen in Saito's system, with a reasonable expectation of success, as judicially required. *Velander v. Garner*, 348 F.3d 1359, 68 USPQ2d 1769 (Fed. Cir. 2003); *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Based upon the foregoing Applicants submit that the above enumerated rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103 are not factually or legally viable and, hence, solicit withdrawal thereof.

Application No.: 10/774,417

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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